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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,308	07/14/2000	Toshitaka Agano	Q58739	8383

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
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2677

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/617,308

Applicant(s)

AGANO, TOSHITAKA

Examiner

Abbas I. Abdulsalam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to a communication filed on 06/01/05. Claims 1-27 are pending.

Response to Arguments

2. Applicant's arguments, see (pages 7-11), filed on 06/01/05 with respect to the rejection(s) of claim(s) 1-27 under U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kazutoshi (Japanese Publication # 04-068391).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9-13, 16, 19 and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazutoshi (Japanese Publication # 04-068391).

Regarding claim 1, Kazutoshi teaches an image display method for displaying a monochromatic image (see the abstract, display ON) with a color display device in which a unit pixel is compressed of R, G and B cells (see the abstract, array of RGB filters constituting one pixel), comprising the step of displaying the monochromatic image having a higher gradation

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resolution than reproduction performance of each of the R, G and B cells in said color display device (see the abstract, increasing gradations of white, note it is inherent that the bits for the white is total number of bits of RGB, which is greater than each of the RGB bits).

Regarding claim 10, Kazutoshi teaches an image display apparatus comprising a color display device in which a unit pixel is composed of R, G and B cells; (see the abstract, array of RGB filters constituting one pixel) a data allocating unit by which input data of a monochromatic image to be displayed on said color display device is allocated to R, G and B data for the R, G and B cells, respectively; (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel); and a processing unit by which the R,G and B data of the monochromatic image obtained by allotment by said data allotting unit is output to the R, G and B cells for display on said color display device (it is inherent that DR, DG and DB being outputted from a display system, is done by a processor), wherein the monochromatic image is displayed having a higher gradation resolution than reproduction performance of each of the R, G and B cells in said color display device(see the abstract, increasing gradations of white, note it is inherent that the bits for the white is total number of bits of RGB, which is greater than each of the RGB bits).

Regarding claims 2 and 26-27, Kazutoshi teaches one pixel of said monochromatic image is displayed using said unit pixel composed of said R, G and B cells (see the abstract, display ON, and RGB filters constituting one pixel).

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Regarding claim 3, Kazutoshi teaches input data of said one pixel of said monochromatic image is allotted to said R, G and B cells of said unit pixel (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel).

Regarding claims 4 and 11, Kazutoshi teaches a minimum value and a maximum value of said input data are respectively allowed to correspond to approximate minimum and maximum luminance values as obtained by combining said R, G and B cells (see the abstract, display ON, display dot data, DR, DG, DB, difference in brightness, and RGB filters constituting one pixel. Note the inherent RGB bits with each color being one third of the whole).

Regarding claims 5 and 24-25, Kazutoshi teaches the maximum value of said input data is converted to a sum of values from R, G and B cells and used as a new set of input data (see the abstract, display ON, display dot data, DR, DG, DB, difference in brightness, and RGB filters constituting one pixel. Note the inherent RGB bits with each color being one third of the whole).

Regarding claim 6, Kazutoshi teaches data for each of the RGB cells in said input data has been obtained by generally equal allotment (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel).

Regarding claims 9 and 16, Kazutoshi teaches data for each of said R, G and B cells is allotted to data for a plurality of time-divided frames and the data allotted to each of said time-divided frames is used to perform time divided driving of said R, G, B cells independently of each other to produce said monochromatic image (see the abstract, display ON, display dot data, DR, DG, DB, RGB filters constituting one pixel and timing signal, STM).

Regarding claims 12, Kazutoshi teaches said data allotting unit converts the maximum value of said input data to become equal to a sum of values from R, G and B cells (see the abstract,

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display ON, display dot data, DR, DG, DB, difference in brightness, and RGB filters constituting one pixel. Note the inherent RGB bits with each color being one third of the whole).

Regarding claim 13, Kazutoshi teaches data for each of the R, G and B cells in said input data has been obtained by generally equal allotment (see the abstract, display ON, display dot data, DR, DG, DB, and RGB filters constituting one pixel).

Regarding claim 16, Kazutoshi teaches a control means for allotting data for each of said R, G and B cells to data for a plurality of time-divided frames and performing time-divided driving of said R, G and b cells independently of each other using the data allotted to each of said time-divided frames (see the abstract, display ON, display dot data, DR, DG, DB, RGB filters constituting one pixel and timing signal STM).

Regarding claims 19, Kazutoshi teaches luminance values that are displayed with said unit pixel, are at least three times as many as those that are displayed with each of the R, G and B cells (see the abstract, display dot data, DR, DG, DB and difference in brightness. Note the inherent RGB bits with each color being one third of the whole).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 7-8, 14-15, 17-18 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazutoshi (Japanese Publication # 04-068391) in view of Ohta (USPN 6608927).

Regarding claims 7, 14 and 22-23, kazutoshi does not teach the data for each of the R, G and B expressed by coordinates (x, y) on a CIE chromaticity diagram.

Ohta on the other hand teaches as shown in Fig. 5 a CIE 1931--xy chromaticity diagram in which a color space having three primary colors, which are indicated by 41, 42, and 43, as reference color stimuli, is defined (col. 7, lines 1-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time then invention was made to represent kazutoshi's display dot data (DR, DG and DB) that is indicated in the abstract in terms of Ohta's chromatic diagram as illustrated in Fig. 5 because the use of chromatic diagram helps achieve an effective color conversion process as taught by Ohta (col. 7, lines 7-15).

Regarding claim 8, Ohta teaches said input data and a mass of the data fro each of R, G and B cells are used in 1:1 correspondence (col. 7, lines 1-45).

Regarding claim 15, Ohta teaches said input data and a mass of the data fro each of R, G and b cells are used in 1:1 correspondence (col. 7, lines 1-45).

Regarding claim 17-18, Ohta teaches said image data is based on an image being used for medical diagnosis (col. 14, lines 8-13).

Regarding claim 20-21, Ohta teaches said data allotting unit is in said processing unit, and said processing unit further comprises: frame memories; a data converting section; and a

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switching section for sequentially outputting data stored in said frame memories (col. 6, lines 1-14 and Fig.1 (15, 16)).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is (571) 272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas Abdulsalam

Examiner

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August 16, 2005


XIAO WU
PRIMARY EXAMINER